## Abstract of the Invention

The invention is directed to the novel finding that an embryo's extraembryonic tissue provides a source of compounds capable of stimulating a population of undifferentiated mesodermally derived cells to undergo at least one of hematopoiesis, endothelial cell proliferation and endothelial cell differentiation. In particular, the invention is directed toward selecting a first compound selected from hedgehog and wnt and optionally a second compound, more specifically TGF-B to achieve the above described effect. The invention is further directed to a method for identifying a compound having the specified biological function from an embryo's extraembryonic tissue.